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trinamiX, Visionox and STMicroelectronics present cost-efficient, secure Face Authentication system for behind-OLED integration in smartphones

- *Product-ready Face Authentication invisibly integrated behind smartphone displays on show at Mobile World Congress 2024 (trinamiX, Hall 6, booth E68; ST, Hall 7, Booth 7A61)*

- *System contains an integration-ready semi-transparent OLED display from Visionox, a high-performance global-shutter CMOS sensor from ST, trinamiX' sensing module design and algorithms for secure liveness detection*

- *Integration into new smartphone series feasible within six to nine months at competitive system cost*

Ludwigshafen, Germany; Beijing, China; Geneva, Switzerland -- February 21, 2024 – trinamiX, a leading provider of biometric solutions, has developed a system for invisible Face Authentication in smartphones together with top-class partners, Visionox and ST. Visionox, the world's leading manufacturer of integrated advanced display solutions, contributes the semi-transparent OLED display, allowing the invisible mounting of the Face Authentication module behind the screen. This display is ready for series integration at a competitive price, eliminating the need for a from-scratch custom design. STMicroelectronics, a global semiconductor leader serving customers across the spectrum of electronics applications, adds its exceptional global-shutter CMOS sensor with improved near-infrared (NIR) sensitivity. The advanced combination of the ultra-compact hardware, the sophisticated algorithms from trinamiX, and the semi-transparent OLED display is available to OEMs for integration into new smartphone series within six to nine months.

Experience secure Face Authentication for smartphones at MWC 2024 on the trinamiX booth in Hall 6, E68, and on the ST booth in Hall 7, Booth 7A61

At the Mobile World Congress in Barcelona, visitors will be able to get their hands on the ultra-compact trinamiX Face Authentication module measuring just 13 x 8 x 4,4 mm. Despite its small size, it comprises a complete system implementation including flood and dot illumination and a camera module based on ST's global-shutter image sensor with improved near-infrared (NIR) sensitivity.

"Its class-leading pixel and advanced performances make our global-shutter image sensor a perfect match for use in trinamiX' secure Face Authentication systems. It is ideal for creating ultra-compact modules and their easy integration into smartphones. This new solution developed with our partners is an additional testimony of ST's world-class in-house design and manufacturing capabilities positioning ST as a pioneer and leader in Face Authentication in Personal Electronics and beyond," says David Maucotel, Head of the Personal Electronics, Industrial and Mass-Market Product Business Line at ST's Imaging sub-Group.

Visionox is contributing its high-performance, semi-transparent OLED display, which is now available in the same price range as state-of-the-art panels.

"Visionox has created products that are truly at the edge of innovation. With its expertise and pioneering spirit, trinamiX is a perfect fit for us and our aspiration to develop groundbreaking products. One of these is the secure trinamiX Face Authentication," comments the Technical Management of Visionox. *"Due to our market size, we are in the position to provide this technology quickly, cost-effectively, and reliably in large quantities and can thus make a major contribution to the success of trinamiX Face Authentication."*

Stefan Metz, Head of Smartphone Business Asia, trinamiX: *"Our focus is on the ideal balance between premium performance and cost efficiency. Thanks to our partners Visionox and STMicroelectronics, it is now even easier for OEMs to integrate our solution in their new generations of smartphones. At MWC, we expect great interest in our live demonstrations of the trinamiX Face Authentication."*

Patented Face Authentication with trinamiX liveness check

trinamiX Face Authentication combines regular 2D face detection and recognition with trinamiX's unique liveness check based on skin detection. This makes today's authentication methods more secure while providing the convenience of a touchless solution.

trinamiX Face Authentication fulfills the highest biometric security requirements defined by the International Internet Finance Authentication Alliance (IIFAA), the FIDO Alliance and Android (Google). It has thus been approved for Android integration and for use with particularly high security demands such as digital payment processes. Its unmatched performance is based on the underlying patent-protected algorithms that verify a person's liveness by checking for human skin. Thanks to the new approach, trinamiX Face Authentication is the first solution to also pass these certifications while the hardware is invisibly mounted behind OLED.

Learn more about trinamiX at the MWC 2024:
https://trinamixsensing.com/mwc-2024

Learn more about ST at MWC 2024:
https://www.st.com/content/st_com/en/events/mwc-barcelona.html?icmp=tt37102_em_bn_jan2024

About trinamiX GmbH
trinamiX GmbH develops cutting-edge biometric and mobile NIR spectroscopy solutions, which are used in both consumer electronics and industrial designs. The company's products enable humans and machines to better capture data with the goal of understanding the world around us. This results in improved decision making as well as stronger biometric security. trinamiX, based in Ludwigshafen (Germany), was founded in 2015 as a wholly owned subsidiary of BASF SE. The company employs over 240 people worldwide and holds more than 600 patents and patent applications.

About Visionox
As the world's leading supplier of integrated advanced display solutions, Visionox was founded in 2001. The company operates under a vision of "pushing boundaries to enhance the experience of vision" and a mission of "leading China's OLED industry through technological innovation." With over 20 years of experience in OLED technology, Visionox has become a globally leading enterprise in the OLED industry, covering R&D, production, and sales.

Visionox has mastered many core OLED technologies and applied 14,000 key OLED patents to date. It has also received a number of prestigious awards: First Prize in the State Technological Invention Award (issued by the State Council of the PRC), the China Patent Gold Award (jointly issued by the WIPO and the Chinese Patent Office), and more. In 2002, Visionox initiated the formulation of OLED international and national standards and continues to lead the endeavor. Visionox is responsible for the formulation and revision of five OLED international standards and leading the formulation of seven OLED national standards and nine OLED industrial standards. www.visionox.com

Visionox has innovated and created products that are truly at the edge of innovation, which have been utilized in applications as diverse as consumer electronics (phones, wearables etc.) automotive displays, industrial control instruments, telecommunications and more. www.visionox.com

About STMicroelectronics
At ST, we are over 50,000 creators and makers of semiconductor technologies mastering the semiconductor supply chain with state-of-the-art manufacturing facilities. An integrated device manufacturer, we work with more than 200,000 customers and thousands of partners to design and build products, solutions, and ecosystems that address their challenges and opportunities, and the need to support a more sustainable world. Our technologies enable smarter mobility, more efficient power and energy management, and the wide-scale deployment of cloud-connected autonomous things. We are committed to achieving our goal to become carbon neutral on scope 1 and 2 and partially scope 3 by 2027. Further information can be found at www.st.com.

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